We claim:

1. A tantalum sputter target, the sputter target comprising:

a tantalum body having tantalum grains formed from consolidating tantalum powder, the tantalum body having a sputter face, the sputter face having an atom transport direction for transporting tantalum atoms away from the sputter face for coating a substrate, the tantalum grains having at least about a 40 percent (222) direction orientation ratio and less than about a 15 percent (110) direction orientation ratio in an atom transport direction away from the sputter face for increasing sputtering uniformity, the tantalum body being free of (200)-(222) direction banding detectable by Electron Back-Scattering Diffraction and wherein said sputter target has a purity of at least 99.99 (%) percent.

2. The sputter target of claim 1 wherein the atom transport direction is orthogonal to the sputter face.

3. The sputter target of claim 1 wherein the grains have at least about a 45 percent (222) direction orientation ratio and less than about a 10 percent (110) direction orientation ratio in the atom transport direction.

4. The sputter target of claim 1 wherein the grains have less than about a 30 percent (200) direction orientation ratio, less than about a 30

percent (211) direction orientation ratio and less than about a 30 percent (310) direction orientation ratio.

5. The sputter target of claim 1 wherein said sputter target has a purity of at least 99.995 (%) percent.

6. A tantalum sputter target, the sputter target comprising:

a tantalum body having tantalum grains formed from consolidating tantalum powder, the tantalum body having a sputter face, the sputter face having an atom transport direction for transporting tantalum atoms away from the sputter face for coating a substrate, the tantalum grains having at least about a 45 percent (222) direction orientation ratio, less than about a 30 percent (200) direction orientation ratio, less than about a 30 percent (211) direction orientation ratio, less than about a 30 percent (310) direction orientation ratio and less than about a 10 percent (110) direction orientation ratio in the atom transport direction away from the sputter face for increasing sputtering uniformity, the tantalum body being free of (200)-(222) direction banding detectable by Electron Back-Scattering Diffraction and wherein said sputter target has a purity of at least 99.99 (%) percent.

7. The sputter target of claim 6 wherein the atom transport direction is orthogonal to the sputter face.

8. The sputter target of claim 6 wherein the grains have at least about a 50 percent (222) direction orientation ratio and less than about a 5 percent (110) direction orientation ratio in the atom transport direction.

9. The sputter target of claim 6 wherein the grains have less than about a 25 percent (200) direction orientation ratio, less than about a 25 percent (211) direction orientation ratio and less than about a 25 percent (310) direction orientation ratio.

10. A tantalum sputter target, the sputter target comprising:

a tantalum body having tantalum grains formed from consolidating tantalum powder, the tantalum body having a sputter face, the sputter face having an atom transport direction for transporting tantalum atoms away from the sputter face for coating a substrate, the tantalum grains having at least about a 50 percent (222) direction orientation ratio, less than about a 25 percent (200) direction orientation ratio, less than about a 25 percent (211) direction orientation ratio, less than about a 25 percent (310) direction orientation ratio and less than about a 5 percent (110) direction orientation ratio in the atom transport direction from the sputter face for increasing sputtering uniformity, the tantalum body being free of (200)-(222) direction banding detectable by Electron Back-Scattering Diffraction and wherein said sputter target has a purity of at least 99.99 (%) percent.

11. The sputter target of claim 10 wherein the atom transport direction is orthogonal to the sputter face.

12. The sputter target of claim 10 wherein the target coats the substrate with a maximum of about 1.5 percent 1 sigma sheet resistance uniformity in a rotating magnetron sputtering chamber using an RMX type magnet.

13. The sputter target of claim 6 wherein said sputter target has a purity of at least 99.995 (%) percent.

14. The sputter target of claim 10 wherein said sputter target has a purity of at least 99.995 (%) percent.